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REMARKS

In view of both the amendments presented above and the following discussion, the Applicant submits that all of the claims now pending in the application satisfy the requirements of 35 U.S.C. § 112. Additionally, the claims also fully satisfy the requirements of 35 U.S.C. §§ 102 and 103. Thus, the Applicant believes that all of these claims are now in allowable form.

Rejections

A. 35 U. S. C. § 112

Claims 1-29 stand rejected under 35 U. S. C. § 112, second paragraph. Specifically, the Examiner indicates that the phrase "to be" should be deleted from claims 1 and 11, and that claims 24-29 should recite active steps. Claims 1, 11, 24, and 27-29 have been amended delete the phrase "to be" and to recite active steps.

In view of the above amendments, the Examiners rejection of claims 1-29 pursuant to 35 U. S. C. § 112 has been removed. Therefore, it is respectfully requested that this rejection be withdrawn.

B. 35 U.S.C. § 102

The Examiner has rejected claims 1, 5-14 and 18-29 as being anticipated by U.S. Patent No. 5,765,444 issued June 16, 1998 to Bacchi et al. (hereinafter Bacchi). The Examiner has also similarly rejected each of the above-identified claims as being clearly anticipated by U.S. Patent No. 6,155,768 issued December 5, 2000 to Bacchi et al. (hereinafter Bacchi 2). The rejections to the above-identified claims with respect to both Bacchi references is respectfully traversed.

Each of Bacchi and Bacchi 2 have been carefully reviewed so as to ascertain the specific construction of each invention disclosed by the subject references. As a result of such inspection, it is respectfully submitted that neither of these references

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particularly and distinctly read upon the independent claims. The specifics of which are brought forth as follows.

There is no specific teaching or disclosure of the seventh and eighth elements of claim 1 (the first and second extension motors). Specifically, the first and second extension motors as claimed in the subject invention provide controllable, simultaneous extension or attraction of first/second extension arms and robot blades. This is clearly not taught, disclosed or suggested in either Bacchi or Bacchi 2. In fact, there is an explicit teaching that shows that a single motor of Bacchi or Bacchi 2 does not provide the claimed control conditions or construction. For example, it is very clearly shown at column 5, lines 40-55 that the first motor 50R and second motor 52R are necessary to rotate different portions of the robot arm. That is, first motor 50R rotates a forearm spindle 56R and second motor 52R rotates an upper arm spindle 80R. "Coordinated operation of first and second motors 50R and 52R in conjunction with mechanical linkage...causes hand 30R to rotate about shoulder axis 16R" (column 5, lines 54-57, Bacchi). Additionally, "complicated concurrent linear and angular displacement move profiles of hand 30R could be accomplished by programming controller 54 to operate motors 50R and 52R through different angular displacements" (column 10, lines 6-11, Bacchi). Additionally, column 9, lines 32-44 of Bacchi 2 specifically describe the fact that three motors are needed to carry out straight line motion of the offset hand 30R. Therefore, from the disclosed teachings of either Bacchi or Bacchi 2 it can be concluded that motor 50R will only actuate blade 30R and not also first arm 14R. Similarly, second motor 52R will only actuate arm 14R and not also blade 30R. The same analysis holds true for the left hand assembly. Therefore, neither the specific mounting of Applicant's blade to robot arm structure, nor the extension motor configuration to allow simultaneous extension retraction of the robot arm and blade with a single motor on one side is disclosed. Accordingly, neither of the cited references teach, disclose or suggest the invention of claim 1.

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A similar analysis and argument can be provided with respect to the invention claimed in claim 11. That is, neither the seventh or eighth elements of claim 11 are disclosed in cited references. Specifically, Applicant claims a first robot blade hub being rotatably mounted to a distal location of the first robot arm from the first extension hub and a second robot blade hub being rotatably mounted to a distal location of the second robot arm from the second extension hub. This structure is plainly not seen in either Bacchi or Bacchi 2 because, and as disclosed above, the intermediate forearm 22R is mounted to upper arm and then blade 30R is mounted to forearm 22R. Accordingly, the attendant hub of forearm 22R, 32R is not part of upper arm 14R as would be required to read upon the subject claim language and invention. The same analysis, of course, holds true for the second robot blade hub with respect to the left side assembly of either Bacchi or Bacchi 2.

With regards to independent claim 24, it is respectfully submitted that the claimed method steps are not disclosed by either of Bacchi or Bacchi 2. That is, the claimed method includes a step of rotating the main robot link to insert the first robot blade (by simultaneously extending the first extension arm and robot blade). The references clearly do not perform such a step. Specifically, Applicant directs attention to Bacchi, Figs. 10 and 11 whereby wafer transfer sequences are shown in various frames. At no time is the main robot link (i.e., item 11) rotated to perform the claimed insertion step. Bacchi relies solely on the degree of freedom of the intermediate elbow 22 and arm 14 to accomplish its Insertion step. Accordingly, the claim is not anticipated by these teachings. As such, the Applicant submits that claims 1, 11 and 24 are not anticipated and fully satisfy the requirements under 35 U.S.C. § 102 and is patentable thereunder. Furthermore, claims 6, 7, 12-14, 19-21 and 25-29 depend, either directly or indirectly, from independent claims 1, 11 and 24 and recite additional features thereof. As such, and for at least the same reasons discussed above, the applicants submit that these dependent claims also fully satisfy the requirements under 35 U.S.C. § 102 and are patentable thereunder. Therefore, the applicants respectfully request that the rejection be withdrawn.

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C. 35 U.S.C. § 103

1. Claims 2 and 15

Claims 2 and 15 are rejected under 35 U.S.C. § 103 as being unpatentable over either Bacchi or Bacchi 2 in view of U.S. Patent No. 6,212,968 issued April 10, 2001 to Hiruma et al. (hereinafter Hiruma). Specifically, the Examiner alleged that it would have been obvious to use a stepper motor for each motor in either of the primary references in view of Hiruma's teachings if it was desired to save weight. The rejection is respectfully traversed.

Claims 2 and 15 depend either directly or indirectly upon either independent claim 1 or 11 and recite additional features thereof. It has above been discussed and argued that the teachings and disclosure of either Bacchi or Bacchi 2 are insubstantial in forming the basis of an anticipation rejection. Therefore, any attempt at combination of either Bacchi or Bacchi 2 with an additional reference to attack features of dependent claims will not support a conclusion of obviousness. That is, without the desired robot blade, extension arm and extension motor configurations as described and claimed in the independent claims, any resultant combination of references will still fail to disclose this invention. Accordingly, it is respectfully submitted that the combination of either Bacchi or Bacchi 2 with Hiruma is not obvious with respect to the dependent claims and such claims are patentable under the statute.

Conclusion

The Applicant submits that all of these claims now pending in the application fully satisfy all requirements of 35 U.S.C. §§ 112, 102 and 103. Consequently, the applicant believes that all these claims are presently in condition for allowance. Accordingly, the Applicant now earnestly solicits reconsideration of this application and its swift passage to issue.

If, however, the Examiner believes that any unresolved issues still exist in any of these claims that require a continuance of the adverse final action therefor, it is requested that the Examiner telephone Mr. Raymond Moser at (732) 530-9404 so that

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appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

6/27/03

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CERTIFICATE OF FACSIMILE TRANSMISSION under 37 C.F.R. §§ 1.6 and 1.8

I certify that this correspondence is being transmitted by facsimile under 37 C.F.R. §§ 1.6 and 1.8 on June 27, 2003 and is addressed to the Commissioner for Patents, Washington, D.C. 20231, Facsimile Number: (703) 872-9326

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